

- [54] **COMPUTER SYSTEM AND METHOD FOR SUGGESTING TREATMENTS FOR PHYSICAL TRAUMA**
- [75] Inventors: **Kenneth Dormond**, Malvern; **Robert J. Friedman**, Paoli, both of Pa.
- [73] Assignee: **501 Synthes (U.S.A.)**, Paoli, Pa.
- [21] Appl. No.: **85,511**
- [22] Filed: **Aug. 13, 1987**
- [51] Int. Cl.⁴ **G06F 15/42**
- [52] U.S. Cl. **364/513; 364/413.02; 364/200; 364/274.5; 364/274.7; 364/275.7; 364/900**
- [58] Field of Search **364/513, 413, 415, 300, 364/200 MS File, 900 MS File, 413.01, 413.02; 128/630**

[56] **References Cited**

U.S. PATENT DOCUMENTS

4,130,881	12/1978	Haessler et al.	364/900
4,315,309	2/1982	Coli	364/200
4,489,387	12/1984	Lamb et al.	364/513 X
4,517,468	5/1985	Kemper et al.	364/513 X
4,591,983	5/1986	Bennett et al.	364/403
4,611,298	9/1986	Schuldt	364/900
4,642,782	2/1987	Kemper et al.	364/513 X
4,644,479	2/1987	Kemper et al.	364/513 X
4,648,044	3/1987	Hardy et al.	364/513
4,649,515	3/1987	Thompson et al.	364/900
4,654,852	2/1987	Bentley et al.	364/900 X
4,656,603	4/1987	Dunn	364/900
4,658,370	4/1987	Erman et al.	364/513
4,730,259	3/1988	Gallant	364/415 X
4,731,725	3/1988	Suto et al.	364/415
4,733,354	3/1988	Potter et al.	364/415

OTHER PUBLICATIONS

"Field Catagorization of Trauma Patients and Hospital

Trauma Index", *Bulletin of the American College of Surgeons*, vol. 65, Feb. 1980, pp. 28-33.

Brochure entitled "Texas Instruments Personal Consultant TM Series Applications", Texas Instruments, 1987 (20 pages).

Gibson, Richard, "The Computer is in: More Doctors Use High-Tech Help for Diagnoses", *Wall Street Journal*, Jul. 8, 1987.

Nguyen, Tin A., Perkins, Walton A., Laffey, Thomas J. and Pecora, Deanne, "Knowledge Base Verification", *AI Magazine*, vol. 8, No. 2, (Summer 1987), pp. 69-75.

Primary Examiner—Joseph Ruggiero

Attorney, Agent, or Firm—Davis Hoxie Faithfull & Hapgood

[57] **ABSTRACT**

An expert system which provides one or more suggested treatments for a patient with physical trauma is disclosed. The system includes a computing device having a memory, a plurality of data bases in the memory, an application program and an inference engine program. The data bases include graphical illustrations of different types of physical trauma, and a knowledge base which contains treatment information. The application program is executed in the computing device and interactively displays a series of screens including at least some of the graphical illustrations, to elicit responses from the user concerning the specific types of physical trauma and specific characteristics of the patient. The inference engine program, which is also executed in the computing device, uses the knowledge base and information related to the responses elicited from the user, for selecting one or more suggested treatments. The application program presents the suggested treatments to the user after execution of the inference engine program.

17 Claims, 12 Drawing Sheets

